

CLAIMS:

sub 37 21. A process for producing a reinforced slab of products made of stone material, having a reinforcement which includes a hardened resin combined with a rear face of the slab, comprising:

5 providing a slab of stone material having a rear substantially smooth face,
providing a layer of non-twisted linear glass reinforcing elements applied to the
said rear face;

coating the non-twisted linear glass reinforcing elements with a coating of a
resin to form a reinforcement having a percentage ratio by weight of resin to the
non-twisted linear reinforcing elements of at most 50:50 and hardening of the resin.

22. The process according to claim 21, wherein said layer of non-twisted
linear glass elements consists of glass strands.

23. The process according to claim 22, wherein the percentage weight ratio
of resin to glass-strands is 33:66, and are in the form of a matting or bundles.

24. The process according to claim 21, wherein said slabs of stone material
have a thickness no greater than 10 mm.

25. The process according to claim 24, wherein said slabs of stone material
have a thickness between 6 to 8 mm.

sub 47 26. The process according to claim 21, including inserting further linear
reinforcing elements between said reinforcement layer and the rear face of the slab.

27. The process according to claim 26, wherein said further linear
reinforcing elements are made of metal, and the metal is steel.

28. The process according to claim 26, including housing said further linear
reinforcing elements in grooves or recesses formed in said rear face of the slab.

sub 29. The process according to claim 27, wherein said grooves or recesses form
a grid.

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30. The process according to claim 27, including inserting, as said further linear reinforcing elements, laid down glass fiber yams between said reinforcement and the rear face of the slab linear and sealing the laid down glass fiber yams within said grooves or recesses.

31. The process according to claim 30, wherein said further linear reinforcing elements include rods or bars of extruded fibers of glass and resin.

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32. The process according to claim 31, wherein said linear rods or bars have a diameter of 2 to 2.5 mm.

33. The process according to claim 31, wherein said rods or bars comprise 68% glass and 32% resin, the percentages being expressed by weight.

34. The process according to claim 21, wherein said ratio by weight between the resin and the glass reinforcing elements is 45:55.

35. The process according to claim 21, including hardening of the resin with a catalyst and/or the application of heat.

36. The process according to claim 27, wherein said further linear reinforcing members comprise four 4800 TEX (19.6 g/m) glass threads laid down within grooves formed in the slabs having a dimension of 3 to 4 mm. in depth.

37. The process according to claim 36, wherein said glass threads are non-twisted and have a linear dilatation coefficient of $8 \text{ to } 9 \times 10^{-6}$.

38. The process according to claim 26, wherein said glass threads are cylindrical and have a circular cross-section with a diameter between 2 to 2.5 mm., a linear dilatation coefficient of 7.5×10^{-6} and a glass content of 68 percent and resin content of 32 percent by weight.

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